REMARKS

Claims 1, 22, and 31

Claims 1-3, 7-9, 12-14, 18, 20, 23-27, and 31-36 stand rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent Application Publication No. 2003/0086596 (Hipp). Applicant respectfully notes that in order to sustain a claim rejection under § 102, each of the claimed elements must be disclosed, either expressly or inherently, in the cited reference.

Claim 1 recites *enhancing a moving feature* in the input image *based on a motion of a moving object.* (Emphasis Added) Claims 22 and 31 recite similar limitations. The cited passage (paragraph 40) of Hipp does not disclose or suggest the above limitations. Rather, paragraph 40 of Hipp discloses:

> According to one embodiment, the computer system is programmed via suitable software to provide easy access to a range of image enhancement and edge detection algorithms. The image enhancement and edge detection algorithms allow for tracking of a much wider range of images, image qualities, and object features. *To reduce noise in fluoroscopic images* in particular, if many images have been taken of the spine during a motion maneuver, there can be little motion of the spine between immediately adjacent frames. In that case, adjacent images can be averaged together to create a new image sequence. *Averaging together of adjacent images can significantly reduce noise in the images.*

(Emphasis Added)

As such, paragraph 40 of Hipp discloses *reducing noise* (not enhancing a moving feature) in images by averaging images taken during a motion maneuver. Also, as indicated by the above cited passage, the averaging of the images is performed to enhance image by reducing noise, and not to detect an edge of an object.

In addition, Applicant respectfully submits that an enhancement of an edge of a vertebrae (which happens to be moving) is not the same as enhancement of a moving feature. Notably, in Hipp, the vertebral edge is enhanced based on the anatomical structure of the vertebrae, regardless of whether the vertebrae is moving (i.e., the edge is enhanced even if the vertebrae is not moving). As such, Hipp does not disclose or suggest enhancing a moving feature, nor does it disclose or suggest enhancing a moving feature based on a motion of a moving object.

For at least the foregoing reasons, claims 1, 22, and 31, and their respective dependent claims, are believed allowable over Hipp.

Claims 40, 50, and 53

Claims 40, 43, 46, 49, 50, 53, and 56 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 6,075,557 (Holliman).

Claim 40 recites determining a first composite image based on the reference image and the first image *by performing a subtraction function*, and determining *whether the object has moved* based at least on the first composite image. (Emphasis Added) Claims 50 and 53 recite similar limitations. Holliman does not disclose or suggest the above limitations. According to the Office Action, elements 49 and 50 of figure 12 allegedly disclose the above limitations. However, according to Holliman, in step 49 of figure 12, a template matching is performed by finding a position where there is a best correlation between the template and an underlying image area (See column 6, lines 33-51). Thus, step 49 and its corresponding description in Holliman say nothing about a "subtraction function," and do not disclose or suggest performing a subtraction function to determine a composite image. Also, in step 50 of Holliman, the objective is to locate the target image (See column 6, lines 52-57). As such, step 50 already assumes that the target image has moved, and does not disclose or suggest determining whether the object has moved.

The Office Action also cites to column 11, lines 33-38 of Holliman for the alleged disclosure of the above limitation concerning "subtraction function." In particular, in the Office Action, the "differential movement method" of Holliman is analogized as the claimed "subtraction function." As an initial matter, Applicant respectfully notes that the differential movement method discussed with reference to figure 17 is not used in the template matching step 49 of figure 12 in Holliman. Thus, it would be improper to combine step 49 of figure 12 and the "differential movement method" of figure 17 for the alleged disclosure of the claimed limitation "determining a first composite image based on the reference image and the first image by performing a subtraction function." Note that in order to sustain a rejection under § 102, the

arrangement of the elements as disclosed in the reference must correspond to those described in the rejected claim.

Also, Applicant respectfully notes that the differential movement method in Holliman is actually used to determine a magnitude of movement that has been undergone by an object, as represented by "Δx" and "Δy" (See column 14, line 65 to column 15, line 30). Since Holliman uses differential movement method to determine a *magnitude* of movement that has been undergone by an object, it does not disclose or suggest *determining whether an object has moved* by performing a subtraction function, as recited in the claims. In fact, because the differential movement method of Holliman assumes that the object has moved, the differential movement method of Holliman is not used to determine whether the object has moved, but to determine the magnitude of the movement, as discussed.

For at least the foregoing reasons, claims 40, 50, and 53, and their respective dependent claims, are believed allowable over Holliman.
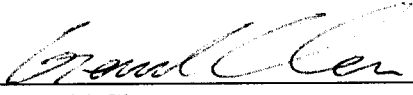
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CONCLUSION

Based on the foregoing, all claims are believed in condition for allowance. If the Examiner has any questions or comments regarding this amendment, please contact the undersigned at the number listed below.

The Commissioner is authorized to charge any fees due in connection with the filing of this document to Bingham McCutchen's Deposit Account No. **50-4047,** referencing billing number **7031422002**. The Commissioner is authorized to credit any overpayment or to charge any underpayment to Bingham McCutchen's Deposit Account No. **50-4047,** referencing billing number **7031422002**.

Respectfully submitted,

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